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| 09/765,829 | 01/19/2001 | Morris D. Ho | WEB1P003 | 9919 |

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| EXAMINER | |
|---|---|
| STOCK JR, GORDON J | |
| **ART UNIT** | **PAPER NUMBER** |
| 2877 | |

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Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/765,829 | HO ET AL. | |
| | Examiner | Art Unit | |
| | Gordon J Stock | 2877 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *11/24/03*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,5-25,27-38 and 40-67* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-25,27-30,32-38 and 40-67* is/are rejected.

7)☒ Claim(s) *31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Drawings*

1. Drawing corrections received on November 24, 2003 are acceptable.

### *Claim Objections*

2. **Claims 1, 34, 49, 62 and 65** are objected to for the following: the term, data "object," is unclear, for a roll map is already a data representation. Clarification/correction is required.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1, 5-9, and 49-51** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** further in view of **Lausier (5,960,374)** and **Bett et al. (6,266,436)**.

As to **claims 1, 5-9, and 49-51**, Van Tyne in an optical web inspection system discloses inspecting a roll of web material to determine the number, type, and location of one or more detectable defects along the web material; outputting a data representation of a roll map; certifying the accuracy of the roll map object representation of the inspected web material to be within a predetermined range of tolerances (col. 6, lines 50-67; col. 7, lines 1-50). Van Tyne discloses performing a self-diagnostic test on said inspection system to determine the performance of the web inspection by the inspection system (col. 13, lines 14-27). Van Tyne discloses generating a digital Product Inspection Certificate containing and certifying the object

map and generating a digital signature, batch information concerning the web material, with the Product Inspection Certificate (col. 7, lines 1-50; Table I). In addition, Van Tyne discloses diagnostics applied whereas velocity error messages and ready or fault messages may occur. The velocity data relates to the conveyance of the web as well as the microprocessor of the inspection system (col. 13, lines 10-25; col. 15, lines 55-67; col. 16, lines 1-50). Therefore, it would be obvious to one skilled in the art that the diagnostic testing comprised retrieving certification data and comparing the data to standardized data, for the system retrieves standardized data of appropriate velocity settings and compares it to the actual velocity settings to ensure that the actual velocity is within tolerance ranges so web inspection may be performed and the microprocessor timing circuitry may be adequately programmed to compensate for the actual velocity maintained.

As for performing a system integrity test measuring performance and calibration of predetermined components of the web inspection system, the performance of the conveyance system is tested (see above). As for calibration, Van Tyne is silent. However, it would be obvious to one skilled in the art that the system is calibrated, for the preprocessor can differentiate defects from the normal surface being inspected. In addition, Adelson in a flaw annunciator teaches calibrating the system in relation to known flaws to define the flaws the system may detect (col. 3, lines 1-20). Therefore, it would be obvious to one skilled in the art at the time to have the system calibrated to conform to known flaw data in order for the system to detect specific types of flaws.

In addition, Lausier teaches in a web system monitoring product quality to assess system performance in order to determine if the system needs to be repaired (col. 2, lines 20-60). And

Bett discloses calibrating sensors in order to assess process performance also in order to adjust or modify process if necessary (col. 11, lines 5-45). Therefore, it would be obvious to one skilled in the art to have calibration and performance monitoring in order to monitor the system and to assess the degree of adjustability or modification of the processing.

5. **Claims 10-17, 18-21, 23, and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** and further in view of **Dante et al. (5,365,596)** and **Lewis, Jr. et al. (6,026,172)** and **Bridges (3,835,332)**.

As for **claim 10**, Van Tyne discloses a preprocessor that differentiates a detected defect from the actual surface being inspected (col. 7, lines 10-15); inspecting the roll of web material for one or more defects, detecting at least one of the one or more defects, determining the location of the at least one detected defect, recording the detection of the defect; measuring the actual certification data; comparing the actual certification data to predetermined data, grading tolerances; and printing out a defect map certifying the data is within grading tolerances (col. 7, lines 20-35; col. 42). Van Tyne is silent concerning calibration; however, Adelson in a flaw annunciator teaches calibrating the system in relation to known flaws to define the flaws the system may detect (col. 3, lines 1-20). Therefore, it would be obvious to one skilled in the art at the time to have the system calibrated to conform to known flaw data in order for the system to detect specific types of flaws. In addition, it would be obvious to one skilled in the art that the system is calibrated, for the preprocessor can differentiate defects from the normal surface being inspected. As for fiducial marks, Van Tyne is silent. Dante in an apparatus for image inspection teaches using fiducial marks to synchronize the scanning with the web motion. Therefore, it would be obvious to one skilled in the art at the time the invention was made to have the location

of the defects determined through fiducial marks, for fiducial marks are used in synchronizing the scanning in relation to the web motion.

As for reinspecting, Van Tyne is silent. However, Bridges in an inspection apparatus teaches reinspecting a web section to verify sensor performance (col. 5, lines 1-30). And Lewis in a web system teaches reinspecting for calibration purposes (Fig. 39). Therefore, it would be obvious to one skilled in the art to have the system comprise reinspection in order to calibrate the system and to certify system performance.

As for **claim 11**, Van Tyne in view of Adelson and Dante discloses everything as above (see **claim 10**). In addition, Van Tyne discloses system integrity test data, velocity data, of predetermined components, the microprocessor and conveyor system, of the web inspection system; measuring includes performing a diagnostic of the velocity to correct the timing circuitry depending on velocity found in order to inspect the web correctly (col. 7, lines 5-30; col. 13, lines 10-25; col. 15, lines 55-67; col. 16, lines 1-50).

As for **claims 12 and 14**, Van Tyne in view of Adelson and Dante discloses everything as above (see **claim 11**). In addition, the diagnostic test is performed before every run and periodically within a predetermined time interval such as the time interval that it takes for the web to achieve adequate velocity or the time for the operator to enter data and the READY signal to appear (col. 13, lines 1-60).

As for **claim 13**, Adelson also teaches time stamping data (Figs. 4-6).

As for **claim 15**, Van Tyne in view of Adelson and Dante discloses everything as above (see **claim 11**). In addition, Van Tyne discloses the predetermined components such as the

microprocessor and timing circuitry comprise the vision hardware (col. 9, lines 30-67; col. 10; col. 16).

As for **claim 16**, Van Tyne in view of Adelson and Dante discloses everything as above (see **claim 11**). In addition, Van Tyne discloses the vision hardware includes cameras, lenses, and light sources (col. 9, lines 30-67; col. 10; col. 16, lines 30-52).

As for **claim 17**, Van Tyne is silent concerning system integrity data comprising lens focus. However, Lewis teaches calibrating a lens in order to have accurate and reliable web inspection (col. 14, lines 1-30). Therefore, it would be obvious to one skilled in the art to have a lens calibration data to ensure system integrity and to have reliable web inspection.

As for **claim 18**, Van Tyne in view of Adelson and Dante discloses everything as above (see **claim 11**). In addition, Van Tyne discloses differentiating detected defects from background variations of fabric surfaces inspected and that there is a yardage counter and velocity correction circuitry (col. 7, lines 5-30).

As for **claim 19**, Van Tyne in view of Adelson and Dante discloses everything as above (see **claim 18**). In addition, Van Tyne mentions a preprocessor differentiating detected defect from background variations found in the fabric inspected (col. 7, line 5-10). Therefore, it would be obvious to one skilled in the art that a inspection parameter include a desired level of flaw detection in order to differentiate a defect from the fabric's surface being inspected.

As for **claim 20**, Van Tyne in view of Adelson and Dante discloses everything as above (see **claim 18**). In addition, Van Tyne discloses inspection parameters provided by an operator (col. 7, lines 20-60).

As for **claim 21**, Van Tyne in view of Adelson and Dante discloses everything as above (see **claim 10**). In addition, Van Tyne discloses time stamping the current measuring the data (cols. 14-16).

As for **claim 23**, Van Tyne in view of Adelson and Dante discloses everything as above (see **claim 10**). In addition, Van Tyne discloses a digital signature is generated that identifies loom, bale, and style of web inspected (Table I).

As for **claim 24**, Van Tyne in view of Adelson and Dante discloses everything as above (see **claim 10**). In addition, Van Tyne discloses determining the cause of the at least one detected defect (col. 42, lines 1-40).

6. **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** and further in view of **Dante et al. (5,365,596)** and **Lewis, Jr. et al. (6,026,172)** and **Bridges (3,835,332)** and further in view of **Smith, Jr. (4,166,541)**.

As for **claim 22**, Van Tyne in view of Adelson and Dante disclose everything as above (see **claim 10**). In addition, Van Tyne discloses a product report comprising actual certification data and the defect map (Table I). Van Tyne's output report does disclose initial parameters of the web such as width, style, loom, bale, but Van Tyne is silent concerning predetermined data. Smith in a web inspection device teaches an output report that comprises reference data (bottom of cols. 13-14; col. 15, lines 1-50). Therefore, it would be obvious to one skilled in the art at the time the invention was made to have the output report comprise predetermined reference data in order to compare the actual data to a reference (tolerance) data in order to classify the data as errors or not.

7. **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** and further in view of **Dante et al. (5,365,596)** and **Lewis, Jr. et al. (6,026,172)** and **Bridges (3,835,332)** in evidence of **Bett et al. (6,266,436)**.

As for **claim 25**, Van Tyne in view of Adelson and Dante discloses everything as above (see **claim 24**). In addition, the defect analysis is configured to classify the defect (col. 42, lines 1-20). Therefore, it would be obvious to one skilled in the art at the time the invention was made that the system does determine the cause of a detected defect by comparing the data with existing defect data, for the computer system classifies the defect type. Also Bett in process control using multiple detections teaches processing signals through comparison to database signal combinations to develop a conclusion as to the probable cause of any anomaly (col. 6, lines 1-15).

8. **Claims 27-30, 32-33** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** and further in view of **Dante et al. (5,365,596)** and **Lewis, Jr. et al. (6,026,172)** and **Bridges (3,835,332)** and further in view of **Buckson (3,970,857).**

As for **claims 27-30 and 32-33**, Tyne in view of Dante disclose fiducial marks. However, they do not disclose using the marks for defect detection. However, Buckson in an apparatus for defect detection teaches using a web swatch of objectionable defects to compare to the actual web being inspected thereby fiducial indicators, standard objectionable defects, are used (col. 2, lines 50-67). Therefore, it would be obvious to one skilled in the art to have a standard web swatch used in order to mark actual defects and their positions by comparison with standard objectionable defects.

9. **Claims 34-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)**

As for **claim 34**, Van Tyne discloses a web inspection system adapted to inspect the roll of web material applying certification data relating to web inspection system and the particular web material to detect at least one or more defects (cols. 6-10); a diagnostic device (col. 13, lines 10-25); a certifying device to certify accuracy of the data map (col. 7, lines 20-31; col. 25, lines 20-67; col. 26, lines 1-35; col. 42). Van Tyne discloses diagnostics applied whereas velocity error messages and ready or fault messages may occur. The velocity data relates to the conveyance of the web as well as the microprocessor of the inspection system (col. 13, lines 10-25; col. 15, lines 55-67; col. 16, lines 1-50). Therefore, it would be obvious to one skilled in the art that the diagnostic device retrieves certification data, for the system retrieves standardized data of appropriate velocity settings and compares it to the actual velocity settings to ensure that the actual velocity is within tolerance ranges so web inspection may be performed and the microprocessor timing circuitry may be adequately programmed to compensate for the actual velocity maintained. As for a time stamping device, Van Tyne is silent. However, Adelson teaches using a time stamping device to record accurate data (Figs. 4-6). Therefore, it would be obvious to one skilled in the art to have a time stamping device in order to accurately record data taken.

As for **claim 35**, Van Tyne discloses everything as above (see **claim 34**). In addition, Van Tyne discloses system integrity test data, velocity data, of predetermined components, the microprocessor and conveyor system, of the web inspection system (col. 13, lines 10-25; col. 15, lines 55-67; col. 16, lines 1-50).

As for **claim 36**, Van Tyne discloses everything as above (see **claim 35**). In addition, Van Tyne discloses the predetermined components such as the microprocessor and timing circuitry comprise the vision hardware (col. 9, lines 30-67; col. 10; col. 16).

As for **claim 37**, Van Tyne discloses everything as above (see **claim 36**). In addition, the vision hardware includes cameras, lenses, and light sources (col. 9, lines 30-67; col. 10; col. 16, lines 30-52).

10. **Claim 38** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** further in view of **Lewis, Jr. et al. (6,026,172)**

As for **claim 38**, see **claim 37** above. In addition, Van Tyne is silent concerning system integrity data comprising lens focus. However, Lewis teaches calibrating a lens in order to have accurate and reliable web inspection (col. 14, lines 1-30). Therefore, it would be obvious to one skilled in the art to have a lens calibration data to ensure system integrity and to have reliable web inspection.

11. **Claims 40 and 41** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** further in view of **Lausier (5,960,374)** and **Bett et al. (6,266,436)**.

As for **claims 40 and 41**, see **claim 35**. In addition, as for desired level of flaw detection, Tyne discloses inspecting the roll of web material for one or more defects, detecting at least one of the one or more defects, determining the location of the at least one detected defect, recording the detection of the defect; measuring the actual certification data; comparing the actual certification data to predetermined data, grading tolerances; and printing out a defect map certifying the data is within grading tolerances (col. 7, lines 20-35; col. 42).

As for certification data corresponding to the particular web material and particular set-up parameters, the performance of the conveyance system is tested against certified data: velocity settings for the product being conveyed (see above). As for calibration, Van Tyne is silent. However, it would be obvious to one skilled in the art that the system is calibrated, for the preprocessor can differentiate defects from the normal surface being inspected. In addition, Adelson in a flaw annunciator teaches calibrating the system in relation to known flaws to define the flaws the system may detect (col. 3, lines 1-20). Therefore, it would be obvious to one skilled in the art at the time to have the system calibrated to conform to known flaw data in order for the system to detect specific types of flaws.

In addition, Lausier teaches in a web system monitoring product quality to assess system performance in order to determine if the system needs to be repaired (col. 2, lines 20-60). And Bett discloses calibrating sensors in order to assess process performance also in order to adjust or modify process if necessary (col. 11, lines 5-45). Therefore, it would be obvious to one skilled in the art to have calibration and performance monitoring in order to monitor the system and to assess the degree of adjustability or modification of the processing versus the actual certified processing parameters.

12. **Claims 42-43** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** further in view of **Smith, Jr. (4,166,541)**.

As for **claim 42**, Van Tyne discloses everything as above (see **claim 34**). In addition, Van Tyne discloses a product report comprising actual certification data and the defect map (Table I). Van Tyne's output report does disclose initial parameters of the web such as width, style, loom, bale, but Van Tyne is silent concerning predetermined data. Smith in a web

inspection device teaches an output report that comprises reference data (bottom of cols. 13-14; col. 15, lines 1-50). Therefore, it would be obvious to one skilled in the art at the time the invention was made to have the output report comprise predetermined reference data in order to compare the actual data to a reference (tolerance) data in order to classify the data as errors or not.

As for **claim 43**, Van Tyne in view of Smith discloses everything as above (see **claim 42**). In addition, Van Tyne discloses a digital signature is generated that identifies loom, bale, and style of web inspected (Table I).

13. **Claim 44** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** in evidence of **Bett et al. (6,266,436)**.

As for **claim 44**, Van Tyne discloses everything as above (see **claim 34**). In addition, the defect analysis is configured to classify the defect (col. 42, lines 1-20). Therefore, it would be obvious to one skilled in the art at the time the invention was made that the system does determine the cause of a detected defect by comparing the data with existing defect data, for the computer system classifies the defect type. Also Bett in process control using multiple detections teaches processing signals through comparison to database signal combinations to develop a conclusion as to the probable cause of any anomaly (col. 6, lines 1-15).

14. **Claims 45-47** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** further in view of **Dante et al. (5,365,596)**.

As for **claims 45-47**, Van Tyne discloses everything as above (see **claim 34**). In addition, Van Tyne discloses a location analysis device to determine the location of the at least one detected defect relative the roll of web material and a recording device to record the

detection of the at least one detected defect (col. 42, lines 1-40). Van Tyne is silent concerning the use of fiduciary indicators. Dante in a method and apparatus for inspection of continuously moving objects teaches using fiducial marks to synchronize line scanning with web motion (col. 5, lines 55-67). Therefore, it would be obvious to one skilled in the art at the time the invention was made to have the system comprise fiducial marks on the web in order to synchronize the line scanning of the web with the web motion. As for the location of the fiducial marks on the web, this an arrangement of parts. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the fiducial marks placed along said roll or along an edge of the web material since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse, 86 USPQ 70*

15. **Claim 48** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** further in view of **Dante et al. (5,365,596)**. and further in view of **Buckson (3,970,857).**

As for **claim 48**, see **claim 45**. They are silent to using defects as fiduciary indicators. However, Buckson in an apparatus for defect detection teaches using a web swatch of objectionable defects to compare to the actual web being inspected thereby fiducial indicators, standard objectionable defects, are used (col. 2, lines 50-67). Therefore, it would be obvious to one skilled in the art to have a standard web swatch used in order to mark actual defects and their positions by comparison with standard objectionable defects.

16. **Claims 52-54** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** and further in view of **Dante et al. (5,365,596)** and **Lewis, Jr. et al. (6,026,172)**.

As for **claims 52-54**, Van Tyne discloses a preprocessor that differentiates a detected defect from the actual surface being inspected (col. 7, lines 10-15); inspecting the roll of web material for one or more defects, detecting at least one of the one or more defects, determining the location of the at least one detected defect, recording the detection of the defect; measuring the actual certification data; comparing the actual certification data to predetermined data, grading tolerances; and printing out a defect map certifying the data is within grading tolerances (col. 7, lines 20-35; col. 42). Van Tyne is silent concerning calibration; however, Adelson in a flaw annunciator teaches calibrating the system in relation to known flaws to define the flaws the system may detect (col. 3, lines 1-20). Therefore, it would be obvious to one skilled in the art at the time to have the system calibrated to conform to known flaw data in order for the system to detect specific types of flaws. In addition, it would be obvious to one skilled in the art that the system is calibrated, for the preprocessor can differentiate defects from the normal surface being inspected. As for fiducial marks, Van Tyne is silent. Dante in an apparatus for image inspection teaches using fiducial marks to synchronize the scanning with the web motion. Therefore, it would be obvious to one skilled in the art at the time the invention was made to have the location of the defects determined through fiducial marks, for fiducial marks are used in synchronizing the scanning in relation to the web motion.

In addition, Van Tyne discloses system integrity test data, velocity data, of predetermined components, the microprocessor and conveyor system, of the web inspection system; measuring includes performing a diagnostic of the velocity to correct the timing circuitry depending on velocity found in order to inspect the web correctly (col. 7, lines 5-30; col. 13, lines 10-25; col. 15, lines 55-67; col. 16, lines 1-50).

In addition, the diagnostic test is performed before every run and periodically within a predetermined time interval such as the time interval that it takes for the web to achieve adequate velocity or the time for the operator to enter data and the READY signal to appear (col. 13, lines 1-60).

Adelson also teaches time stamping data for accurate recording of measurement runs (Figs. 4-6).

As for testing vision hardware, Van Tyne is silent. However, Lewis teaches calibrating a lens in order to have accurate and reliable web inspection (col. 14, lines 1-30). Therefore, it would be obvious to one skilled in the art to have a lens calibration to ensure system integrity and to have reliable web inspection.

17. **Claim 55** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** and further in view of **Buckson (3,970,857).**

Van Tyne discloses a preprocessor that differentiates a detected defect from the actual surface being inspected (col. 7, lines 10-15); inspecting the roll of web material for one or more defects, detecting at least one of the one or more defects, determining the location of the at least one detected defect, recording the detection of the defect; measuring the actual certification data; comparing the actual certification data to predetermined data, grading tolerances; and printing out a defect map certifying the data is within grading tolerances (col. 7, lines 20-35; col. 42). Van Tyne is silent concerning calibration; however, Adelson in a flaw annunciator teaches calibrating the system in relation to known flaws to define the flaws the system may detect (col. 3, lines 1-20). Therefore, it would be obvious to one skilled in the art at the time to have the system calibrated to conform to known flaw data in order for the system to detect specific types

of flaws. In addition, it would be obvious to one skilled in the art that the system is calibrated, for the preprocessor can differentiate defects from the normal surface being inspected.

They are silent to using defects as fiduciary indicators. However, Buckson in an apparatus for defect detection teaches using a web swatch of objectionable defects to compare to the actual web being inspected thereby fiducial indicators, standard objectionable defects, are used (col. 2, lines 50-67). Therefore, it would be obvious to one skilled in the art to have a standard web swatch used in order to mark actual defects and their positions by comparison with standard objectionable defects.

18. **Claims 56-57** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Adelson (5,006,722)** and further in view of **Buckson (3,970,857)** and **Lewis, Jr. et al. (6,026,172)**.

As for testing vision hardware for system integrity test data from at least a lens, Van Tyne is silent. However, Lewis teaches calibrating a lens in order to have accurate and reliable web inspection (col. 14, lines 1-30). Therefore, it would be obvious to one skilled in the art to have a lens calibration to ensure system integrity and to have reliable web inspection.

19. **Claim 58** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Lewis, Jr. et al. (6,026,172)**.

As for **claim 58**, Van Tyne discloses a web inspection system adapted to inspect the roll of web material applying certification data relating to web inspection system and the particular web material to detect at least one or more defects (cols. 6-10); a diagnostic device (col. 13, lines 10-25); a certifying device to certify accuracy of the data map (col. 7, lines 20-31; col. 25, lines 20-67; col. 26, lines 1-35; col. 42). Van Tyne discloses diagnostics applied whereas velocity

error messages and ready or fault messages may occur. The velocity data relates to the conveyance of the web as well as the microprocessor of the inspection system (col. 13, lines 10-25; col. 15, lines 55-67; col. 16, lines 1-50). Therefore, it would be obvious to one skilled in the art that the diagnostic device retrieves certification data, for the system retrieves standardized data of appropriate velocity settings and compares it to the actual velocity settings to ensure that the actual velocity is within tolerance ranges so web inspection may be performed and the microprocessor timing circuitry may be adequately programmed to compensate for the actual velocity maintained.

As for testing vision hardware for system integrity test data from at least a lens, Van Tyne is silent. However, Lewis teaches calibrating a lens in order to have accurate and reliable web inspection (col. 14, lines 1-30). Therefore, it would be obvious to one skilled in the art to have a lens calibration to ensure system integrity and to have reliable web inspection.

20. **Claim 59** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Lewis, Jr. et al. (6,026,172)** further in view of **Smith, Jr. (4,166,541)**.

As for **claim 59**, Van Tyne discloses everything as above (see **claim 58**). In addition, Van Tyne discloses a product report comprising actual certification data and the defect map (Table I). Van Tyne's output report does disclose initial parameters of the web such as width, style, loom, bale, but Van Tyne is silent concerning predetermined data. Smith in a web inspection device teaches an output report that comprises reference data (bottom of cols. 13-14; col. 15, lines 1-50). Therefore, it would be obvious to one skilled in the art at the time the invention was made to have the output report comprise predetermined reference data in order to

compare the actual data to a reference (tolerance) data in order to classify the data as errors or not.

21. **Claim 60** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Lewis, Jr. et al. (6,026,172)** in evidence of **Bett et al. (6,266,436)**.

As for **claim 60**, Van Tyne discloses everything as above (see **claim 58**). In addition, the defect analysis is configured to classify the defect (Van Tyne: col. 42, lines 1-20). Therefore, it would be obvious to one skilled in the art at the time the invention was made that the system does determine the cause of a detected defect by comparing the data with existing defect data, for the computer system classifies the defect type. Also Bett in process control using multiple detections teaches processing signals through comparison to database signal combinations to develop a conclusion as to the probable cause of any anomaly (col. 6, lines 1-15).

22. **Claim 61** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** in view of **Lewis, Jr. et al. (6,026,172)** further in view of **Adelson (5,006,722)**

As for **claim 61**, see **claim 58** above. As for a time stamping device, Van Tyne is silent. However, Adelson teaches using a time stamping device to record accurate data (Figs. 4-6). Therefore, it would be obvious to one skilled in the art to have a time stamping device in order to accurately record data taken.

23. **Claim 62-63** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** further in view of **Lausier (5,960,374)** and **Bett et al. (6,266,436)**.

Van Tyne discloses a web inspection system adapted to inspect the roll of web material applying certification data relating to web inspection system and the particular web material to detect at least one or more defects (cols. 6-10); a diagnostic device (col. 13, lines 10-25); a

certifying device to certify accuracy of the data map (col. 7, lines 20-31; col. 25, lines 20-67; col. 26, lines 1-35; col. 42). Van Tyne discloses diagnostics applied whereas velocity error messages and ready or fault messages may occur. The velocity data relates to the conveyance of the web as well as the microprocessor of the inspection system (col. 13, lines 10-25; col. 15, lines 55-67; col. 16, lines 1-50). Therefore, it would be obvious to one skilled in the art that the diagnostic device retrieves certification data, for the system retrieves standardized data of appropriate velocity settings and compares it to the actual velocity settings to ensure that the actual velocity is within tolerance ranges so web inspection may be performed and the microprocessor timing circuitry may be adequately programmed to compensate for the actual velocity maintained. As for a time stamping device, Van Tyne is silent. However, Adelson teaches using a time stamping device to record accurate data (Figs. 4-6). Therefore, it would be obvious to one skilled in the art to have a time stamping device in order to accurately record data taken. In addition, Van Tyne discloses system integrity test data, velocity data, of predetermined components, the microprocessor and conveyor system, of the web inspection system (col. 13, lines 10-25; col. 15, lines 55-67; col. 16, lines 1-50).

In addition, as for desired level of flaw detection, Tyne discloses inspecting the roll of web material for one or more defects, detecting at least one of the one or more defects, determining the location of the at least one detected defect, recording the detection of the defect; measuring the actual certification data; comparing the actual certification data to predetermined data, grading tolerances; and printing out a defect map certifying the data is within grading tolerances (col. 7, lines 20-35; col. 42).

As for certification data corresponding to the particular web material and particular set-up parameters, the performance of the conveyance system is tested against certified data: velocity settings for the product being conveyed (see above). As for calibration, Van Tyne is silent. However, it would be obvious to one skilled in the art that the system is calibrated, for the preprocessor can differentiate defects from the normal surface being inspected. In addition, Adelson in a flaw annunciator teaches calibrating the system in relation to known flaws to define the flaws the system may detect (col. 3, lines 1-20). Therefore, it would be obvious to one skilled in the art at the time to have the system calibrated to conform to known flaw data in order for the system to detect specific types of flaws.

In addition, Lausier teaches in a web system monitoring product quality to assess system performance in order to determine if the system needs to be repaired (col. 2, lines 20-60). And Bett discloses calibrating sensors in order to assess process performance also in order to adjust or modify process if necessary (col. 11, lines 5-45). Therefore, it would be obvious to one skilled in the art to have calibration and performance monitoring in order to monitor the system and to assess the degree of adjustability or modification of the processing versus the actual certified processing parameters.

Van Tyne discloses a location analysis device to determine the location of the at least one detected defect relative the roll of web material and a recording device to record the detection of the at least one detected defect (col. 42, lines 1-40).

In addition, the defect analysis is configured to classify the defect (col. 42, lines 1-20). Therefore, it would be obvious to one skilled in the art at the time the invention was made that the system does determine the cause of a detected defect by comparing the data with existing

defect data, for the computer system classifies the defect type. Also Bett in process control using multiple detections teaches processing signals through comparison to database signal combinations to develop a conclusion as to the probable cause of any anomaly (col. 6, lines 1-15).

24. **Claim 64** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** further in view of **Lausier (5,960,374)** and **Bett et al. (6,266,436)**.
further in view of **Adelson (5,006,722)**

As for **claim 61**, see **claim 58** above. As for a time stamping device, Van Tyne is silent. However, Adelson teaches using a time stamping device to record accurate data (Figs. 4-6). Therefore, it would be obvious to one skilled in the art to have a time stamping device in order to accurately record data taken.

25. **Claim 65** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** further in view of **Dante et al. (5,365,596)** and further in view of **Buckson (3,970,857).**

As for **claim 65**, Van Tyne discloses a web inspection system adapted to inspect the roll of web material applying certification data relating to web inspection system and the particular web material to detect at least one or more defects (cols. 6-10); a diagnostic device (col. 13, lines 10-25); a certifying device to certify accuracy of the data map (col. 7, lines 20-31; col. 25, lines 20-67; col. 26, lines 1-35; col. 42). Van Tyne discloses diagnostics applied whereas velocity error messages and ready or fault messages may occur. The velocity data relates to the conveyance of the web as well as the microprocessor of the inspection system (col. 13, lines 10-25; col. 15, lines 55-67; col. 16, lines 1-50). Therefore, it would be obvious to one skilled in the

art that the diagnostic device retrieves certification data, for the system retrieves standardized data of appropriate velocity settings and compares it to the actual velocity settings to ensure that the actual velocity is within tolerance ranges so web inspection may be performed and the microprocessor timing circuitry may be adequately programmed to compensate for the actual velocity maintained.

In addition, Van Tyne discloses a location analysis device to determine the location of the at least one detected defect relative the roll of web material and a recording device to record the detection of the at least one detected defect (col. 42, lines 1-40). Van Tyne is silent concerning the use of fiduciary indicators. Dante in a method and apparatus for inspection of continuously moving objects teaches using fiducial marks to synchronize line scanning with web motion (col. 5, lines 55-67). Therefore, it would be obvious to one skilled in the art at the time the invention was made to have the system comprise fiducial marks on the web in order to synchronize the line scanning of the web with the web motion. As for the location of the fiducial marks on the web, this an arrangement of parts. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the fiducial marks placed along said roll or along an edge of the web material since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse, 86 USPQ 70*

They are silent to using defects as fiduciary indicators. However, Buckson in an apparatus for defect detection teaches using a web swatch of objectionable defects to compare to the actual web being inspected thereby fiducial indicators, standard objectionable defects, are used (col. 2, lines 50-67). Therefore, it would be obvious to one skilled in the art to have a

standard web swatch used in order to mark actual defects and their positions by comparison with standard objectionable defects.

26. **Claim 66** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** further in view of **Dante et al. (5,365,596)** further in view of **Smith, Jr. (4,166,541).**

As for **claim 66**, see **claim 65** above. In addition, Van Tyne discloses a product report comprising actual certification data and the defect map (Table I). Van Tyne's output report does disclose initial parameters of the web such as width, style, loom, bale, but Van Tyne is silent concerning predetermined data. Smith in a web inspection device teaches an output report that comprises reference data (bottom of cols. 13-14; col. 15, lines 1-50). Therefore, it would be obvious to one skilled in the art at the time the invention was made to have the output report comprise predetermined reference data in order to compare the actual data to a reference (tolerance) data in order to classify the data as errors or not.

27. **Claim 67** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Van Tyne et al. (4,170,419)** further in view of **Dante et al. (5,365,596)** and further in view of **Buckson (3,970,857)** and further in view of **Adelson (5,006,722)**.

As for a time stamping device, Van Tyne is silent. However, Adelson teaches using a time stamping device to record accurate data (Figs. 4-6). Therefore, it would be obvious to one skilled in the art to have a time stamping device in order to accurately record data taken.

***Allowable Subject Matter***

28. **Claim 31** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to **claim 31**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a method for certifying an inspection of a roll of web material "said reinspection is performed on the roll of web material in an opposite direction of the first indicated web inspection," in combination with the rest of the limitations of **claim 31.**

***Response to Arguments***

29. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. As for the allowable subject matter as set forth in the prior office action, the Examiner apologizes for the inconvenience caused by the grounds of rejection, but after performing an updated search and upon further consideration of the prior art previously cited, the Examiner found new grounds of rejection for the claims.

***Fax/Telephone Numbers***

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and

2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

*Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is:* **(703) 872-9306**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (571) 272-2431. The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

gs
March 22, 2004

Zandra V. Smith
Primary Examiner
Art Unit 2877